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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,035	04/07/2006	Helmut Jerg	2003P01299WOUS	5947

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INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER	
KO, STEPHEN K	
ART UNIT	PAPER NUMBER
1714	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/575,035	JERG, HELMUT	
	Examiner	Art Unit	
	STEPHEN KO	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22,25-27 and 29-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *22,25-27 and 29-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application.
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/15/2010 has been entered.

2. Claims 22, 25-27, 29-41 are currently pending in the application and examined on the merits.

Claim Objections

3. Claim 40 is objected to because of the following informalities: "surrounding the washing **containers**" in L.4 of claim 40 is apparently should be written as surrounding the washing **container**". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 22, 25, 29-30 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567.

For claims 37-39 and 22, DE'882 teaches a dishwasher comprising a washing container having a plurality of walls (Fig.1, #1); a heat damping layer (Fig.1, #3, #4, #5, #6, and #7), comprising an intermediate layer (Fig.1, #3) and a latent heat storage (Fig.1, #5), at the dishwasher's outer surface (abstract), wherein the intermediate layer of the heat damping layer only allows heat crossing from the washing container to the latent heat storage during the drying procedure (read as heat damping layer having variable thermal conductivity in that the heat damping layer can be adjusted between at least a first thermal conductivity value at which thermal conductivity through the heat damping proceeds at a first rate and a second thermal conductivity value at which thermal conductivity through the heat damping proceeds at a second rate different than the first rate, P.2, L.4-16, See translation). Note that the heat damping layer (DE'882, Fig.1, #3, #4, and #5) is in heat-conducting contact with one of walls of the washing container and with an outer wall of the dishwasher (DE'882, P.2, L.4, See translation and abstract) and is intermediate the one wall of the washing container and the outer wall of the dishwasher (Fig.1).

DE'882 does not teach a heat damping layer containing a closed capsule containing hydrogen in which at least one metal hydride grid is arranged, which can

form a chemical compound with the hydrogen and thus bind the hydrogen, the capsule has a selected one of a pressed glass and a non-pressed glass fibre core that is surrounded by a gastight jacket made of a selected one of a stainless steel sheet and a non-stainless steel sheet, the heat damping layer is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is increased and the heat damping layer is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is decreased, wherein a given portion of the variable heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule of the variable heat damping layer and decreased in correspondence with the cooling of the capsule of the variable heat damping layer.

DE'567 teaches a variable heat conductivity insulation panel (read as heat damping layer, title) comprising an evacuated cladded structure (read as gastight jacket, abstract) containing a structured insulating material formed by glass fiber (read as capsule, abstract) enclosing hydrogen metal hydride (abstract and P.2, L.25, See translation) electrically heated in the panel (read as a given portion of the heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule and decreased in correspondence with the cooling of the capsule and the heat damping layer containing a closed capsule, p.2, L.25-26, See translation), wherein

the heat conductivity insulation panel is configured such that heating of the capsule of the variable conductivity insulation panel has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is increased and the heat conductivity insulation panel is configured such that cooling of has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is decreased (DE'567, P.2, L.18-27, See translation). Also note the heat conductivity insulation panel is heated with an electrical heating (DE'567, P.2, L.30-31, See translation) and operable to function at temperature of at least 300 degree Celsius (P.2, L.24-32, See translation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of DE'882 to utilize a heat damping layer as mentioned in DE'567 instead of the heat damping layer of DE'882 to have a vacuum insulation and enhance insulation efficiency.

For claim 25, both DE'882 and DE'567 do not teach an internal pressure of the heat damping layer being about 0.01mbar at room temperature and about 50mbar at a temperature of about 300 degree Celsius. Note that DE'567 teaches an internal pressure of the variable heat conductivity insulation panel being smaller than 0.01 mbar (read as about 0.01mbar, P.2, L.19, See translation).

Regarding claim 25, reciting an internal pressure of the capsule of the heat damping layer at a particular temperature, it is noted that the internal pressure at the particular temperature depends on the type and amount of metal hydride that is used, one skilled in the art would have been found obvious at the time the invention was made to choose a most suitable and mount of metal hydride to enhance the performance of the thermal insulation and conduction of the heat damping layer, as it only involves routine experiments.

For claim 29, note that the variable heat damping layer is disposed in a side wall of the dishwasher (DE'882, Fig.1, abstract).

For claim 30, DE'882 and DE'567 does not teach the heat damping layer is disposed in a selected one of the top and the bottom of the dishwasher.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the attachment position of the variable heat damping layer of combined teaching of DE'882 and DE'567 as it is a matter of design choice, consult, In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

7. Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of Bovenkerk (US 3,167,159).

DE'882 and DE'567 teach a dishwasher cited above.

DE'882 and DE'567 do not teach a controlling means to control the thermal conductivity of the variable heat damping layer, such that the variable heat damping layer is continuously adjustable to arbitrary thermal conductivity value between the first and second thermal conductivity value and the variable heat damping layer having

thermal conductivity value approximately in a range between 0.3W/m^2K and 10W/m^2K. Note that DE'567 teaches an electrical heating (DE'567, P.2, L.30-31, See translation) to adjust the thermal conductivity of the variable heat conductivity insulation panel (read as the heat damping).

Bovenkerk teaches an insulating structures with variable thermal conductivity comprising an electrical heater (Fig.1, #19, col.4, L.45) coupled to a control, which is a rheostat (read as controlling means which is fully capable of continuously adjustable to an arbitrary thermal conductivity value between the first and second thermal conductivity value, Fig.1, #20, col.4, L.47). Note that Bovenkerk also discloses that the thermal conductivity value depends on an internal pressure (Fig.8)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of combined teaching of DE'882 and DE'567 by adding a controlling means to the heater as mentioned in Bovenkerk to control the thermal conductivity of the variable heat damping layer. Regarding claim 27, reciting thermal conductivity value approximately in a range between 0.3W/m^2K and 10W/m^2K, it is noted that the thermal conductivity value depends on an internal pressure at particular temperature, which also depends on the type and amount of metal hydride that is used, one skilled in the art would have been found obvious at the time the invention was made to choose a most suitable and amount of metal hydride to enhance the performance of the internal insulation and conduction of the heat damping layer, as it only involves routine experiments.

8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of Lampman et al (US 4,746,177).

DE'882 and DE'567 teach a dishwasher cited above. Note that DE'882 teaches a dishwasher comprising a cooler surface (read as a wall of the washing container having at least a condensing surface, P.1, paragraph 2, See translation).

DE'882 and DE'567 do not teach a condensing surface made of flexible material comprising plastic film.

Lampman et al teach a dishwasher having a flexible plastic tub (col.5, L.57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of DE'882 by using a flexible plastic tub as mentioned in Lampman et al to facilitate assembly.

9. Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of JP 2002-336180.

DE'882 teaches a method for cleaning and drying tableware in a dishwasher comprising the steps of providing a washing container (Fig.1, #1); a heat damping layer (Fig.1, #3, #4, #5, #6, and #7), comprising a intermediate layer (Fig.1, #3) and a latent heat storage (Fig.1, #5), disposed at least partially surrounding the dishwashing container (Fig.1), wherein dishes in the dishwasher is heated during cleaning and/or rinsing process (P.1, paragraph 2, See translation) and the heat damping layer only allows heat crossing from the washing container to the latent heat storage during the drying procedure (read as disposing the heat damping layer at the relatively lower thermal conductivity value when thermal energy is built up during cleaning and/or

rinsing process in the washing container, and disposing the heat damping layer at the relatively higher thermal conductivity value during drying process, P.2, L.4-16, See translation). Note that DE'882 also teaches the step of providing the heat damping layer (DE'882, Fig.1, #3, #4, and #5) being in heat-conducting contact with one of walls of the washing container and with an outer wall of the dishwasher (DE'882, P.2, L.4, See translation and abstract)

DE'882 remains silent about the step of providing a heat generating means for generating heat in the washing container.

Examiner takes official notice that the use of electric heater to generate heat in the washing container is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of DE'882 by adding an electric heater to generate heat in the washing container to perform heating the dishes during cleaning and/or rinsing process as mentioned in DE'882.

DE'882 remains silent about the step of providing a heat damping layer containing a closed capsule containing hydrogen in which at least one metal hydride grid is arranged, which can form a chemical compound with the hydrogen and thus bind the hydrogen, the capsule has a selected one of a pressed glass and a non-pressed glass fibre core that is surrounded by a gastight jacket made of a selected one of a stainless steel sheet and a non-stainless steel sheet, the heat damping layer is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and

the thermal conductivity of at least one of the capsule and the entire heat damping layer is increased and the heat damping layer is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is decreased.

DE'567 teaches the steps of providing a variable heat conductivity insulation panel (read as heat damping layer, title) comprising an evacuated cladded structure (read as gastight jacket, abstract) containing a structured insulating material formed by glass fiber (read as capsule, abstract) enclosing hydrogen metal hydride (abstract and P.2, L.25, See translation) electrically heated in the panel (read as a given portion of the variable heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule and decreased in correspondence with the cooling of the capsule, and the closed capsule is within a given portion of the variable heat damping layer, p.2, L.25-26, See translation),, wherein the heat conductivity insulation panel is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is increased; and the heat conductivity insulation panel is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule of the variable heat conductivity insulation panel drops, and

the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is decreased (DE'567, P.2, L.18-27, See translation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of DE'882 by providing a heat damping layer as mentioned in DE'567 instead of the heat damping layer of DE'882 to have a vacuum insulation and enhance insulation efficiency.

DE'882 and DE'567 remain silent about the step of providing a dishwasher being operable to execute at least one washing program.

JP 2002-336180 teaches a dishwasher comprising the steps of providing a control means (read as program control, Fig.1, #101, abstract) to execute program (read as washing program, abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of combined teaching of DE'882 and DE'567 by providing a program control to execute at least one washing program, including the operation of the variable heat damping layer, as motivated by JP 2002-336180 to simplify dishwashing procedure.

10. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 and JP 2002-336180 in further view of Milocco (US 5,273,061).

DE'882, DE'567 and JP 2002-336180 teach a method for cleaning and drying tableware cited above.

DE'882, DE'567 and JP 2002-336180 remain silent about water deposited during the drying process in the washing container is passed from the washing container via at least one of discharge via a sump of the dishwasher, discharge via a discharge pump, and discharge via a means other than a sump or a discharge pump of the dishwasher. Note that DE'882 teaches a step of condensing humid air contained in the rinsing space atmosphere at a cooler surface of the washing container (P.1, paragraph 2, See translation).

Milocco teaches a method for drying process in a dishwasher comprising the steps of condensing vapor inside the washtub, and the condensate is collected on the bottom of the tub and evacuated by a discharge pump (col.2, L.38-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of combined teaching of DE'882, DE'567 and JP 2002-336180 by passing the water deposited during the drying process in the washing container from the washing container via a sump and discharging via a discharge pump as motivated by Milocco to reduce the humidity inside the washing container to enhance drying and prevent flooding inside the washing container.

11. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of Tilton et al (US 6,539,955).

DE'882 teaches a dishwasher comprising a washing container having a plurality of walls (Fig.1, #1); a heat damping layer (Fig.1, #3, #4, #5, #6, and #7), comprising an intermediate layer (Fig.1, #3) and a latent heat storage (Fig.1, #5), at the dishwasher's outer surface (abstract), wherein the intermediate layer of the heat damping layer only

allows heat crossing from the washing container to the latent heat storage during the drying procedure (read as heat damping layer having variable thermal conductivity in that the heat damping layer can be adjusted between at least a first thermal conductivity value at which thermal conductivity through the heat damping proceeds at a first rate and a second thermal conductivity value at which thermal conductivity through the heat damping proceeds at a second rate different than the first rate, P.2, L.4-16, See translation). Note that the heat damping layer (DE'882, Fig.1, #3, #4, and #5) is in heat-conducting contact with one of walls of the washing container and with an outer wall of the dishwasher (DE'882, P.2, L.4, See translation and abstract) and is intermediate the one wall of the washing container and the outer wall of the dishwasher (Fig.1).

DE'882 does not teach a heat damping layer containing a closed capsule containing hydrogen in which at least one metal hydride grid is arranged, which can form a chemical compound with the hydrogen and thus bind the hydrogen, the capsule has a selected one of a pressed glass and a non-pressed glass fibre core that is surrounded by a gastight jacket made of a selected one of a stainless steel sheet and a non-stainless steel sheet, the heat damping layer is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is increased and the heat damping layer is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire

heat damping layer is decreased, wherein a given portion of the variable heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule of the variable heat damping layer and decreased in correspondence with the cooling of the capsule of the variable heat damping layer.

DE'567 teaches a variable heat conductivity insulation panel (read as heat damping layer, title) comprising an evacuated cladded structure (read as gastight jacket, abstract) containing a structured insulating material formed by glass fiber (read as capsule, abstract) enclosing hydrogen metal hydride (abstract and P.2, L.25, See translation) electrically heated in the panel (read as a given portion of the heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule and decreased in correspondence with the cooling of the capsule and the heat damping layer containing a closed capsule, p.2, L.25-26, See translation), wherein the heat conductivity insulation panel is configured such that heating of the capsule of the variable conductivity insulation panel has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is increased and the heat conductivity insulation panel is configured such that cooling of has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is decreased (DE'567, P.2, L.18-27, See translation). Also note the heat conductivity insulation panel is heated with an electrical heating (DE'567, P.2, L.30-31,

See translation) and operable to function at temperature of at least 300 degree Celsius (P.2, L.24-32, See translation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of DE'882 to utilize a heat damping layer as mentioned in DE'567 instead of the heat damping layer of DE'882 to have a vacuum insulation and enhance insulation efficiency.

DE '882 and DE '567 remain silent about a sound damping layer surrounding the washing container.

However, Tilton et al teach a dishwasher comprising a sound damping layer (Fig.1a, #26, abstract) surrounding the washing container.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of combined teaching of DE '882 and DE '567 by adding a sound damping layer surrounding the washing container as motivated by Tilton et al to provide acoustical insulation for dishwasher (Tilton et al, col.3, L.64-65). Since Tilton et al teach providing an acoustical insulation blanket (Fig.1,a, #26) on the washing container and the combined teaching of DE '882 and DE '567 teach the wall, which is between the washing container and the heat damping layer, is a common wall of the washing container and the heat damping layer (DE '882, Fig.3), the heat damping layer is disposed between the sound damping layer and the washing container in the combined teaching of DE '882, DE '567 and Tilton et al.

12. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 196 22 882 in view of DE 196 47 567 in further view of Williamson (US 3,387,382).

DE'882 teaches a dishwasher comprising a washing container having a plurality of walls (Fig.1, #1); a heat damping layer (Fig.1, #3, #4, #5, #6, and #7), comprising an intermediate layer (Fig.1, #3) and a latent heat storage (Fig.1, #5), at the dishwasher's outer surface (abstract), wherein the intermediate layer of the heat damping layer only allows heat crossing from the washing container to the latent heat storage during the drying procedure (read as heat damping layer having variable thermal conductivity in that the heat damping layer can be adjusted between at least a first thermal conductivity value at which thermal conductivity through the heat damping proceeds at a first rate and a second thermal conductivity value at which thermal conductivity through the heat damping proceeds at a second rate different than the first rate, P.2, L.4-16, See translation). Note that the heat damping layer (DE'882, Fig.1, #3, #4, and #5) is in heat-conducting contact with one of walls of the washing container and with an outer wall of the dishwasher (DE'882, P.2, L.4, See translation and abstract) and is intermediate the one wall of the washing container and the outer wall of the dishwasher (Fig.1).

DE'882 does not teach a heat damping layer containing a closed capsule containing hydrogen in which at least one metal hydride grid is arranged, which can form a chemical compound with the hydrogen and thus bind the hydrogen, the capsule has a selected one of a pressed glass and a non-pressed glass fibre core that is surrounded by a gastight jacket made of a selected one of a stainless steel sheet and a non-stainless steel sheet, the heat damping layer is configured such that heating of the capsule has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least

one of the capsule and the entire heat damping layer is increased and the heat damping layer is configured such that cooling of the capsule has the effect that the free hydrogen is resorbed with the metal hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat damping layer is decreased, wherein a given portion of the variable heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule of the variable heat damping layer and decreased in correspondence with the cooling of the capsule of the variable heat damping layer.

DE'567 teaches a variable heat conductivity insulation panel (read as heat damping layer, title) comprising an evacuated cladded structure (read as gastight jacket, abstract) containing a structured insulating material formed by glass fiber (read as capsule, abstract) enclosing hydrogen metal hydride (abstract and P.2, L.25, See translation) electrically heated in the panel (read as a given portion of the heat damping layer has its thermal content respectively increased in correspondence with the heating of the capsule and decreased in correspondence with the cooling of the capsule and the heat damping layer containing a closed capsule, p.2, L.25-26, See translation), wherein the heat conductivity insulation panel is configured such that heating of the capsule of the variable conductivity insulation panel has the effect that the hydrogen previously bound in the metal hydride grid is released, the pressure in the capsule increases, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is increased and the heat conductivity insulation panel is configured such that cooling of has the effect that the free hydrogen is resorbed with the metal

hydride grid in a chemical compound, the pressure in the capsule drops, and the thermal conductivity of at least one of the capsule and the entire heat conductivity insulation panel is decreased (DE'567, P.2, L.18-27, See translation). Also note the heat conductivity insulation panel is heated with an electrical heating (DE'567, P.2, L.30-31, See translation) and operable to function at temperature of at least 300 degree Celsius (P.2, L.24-32, See translation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of DE'882 to utilize a heat damping layer as mentioned in DE'567 instead of the heat damping layer of DE'882 to have a vacuum insulation and enhance insulation efficiency.

DE '882 and DE '567 teach the walls of the washing container forming the volume are configured as condensing surfaces (DE '882, paragraph 4 of P.4 of the translation). However, DE '882 and DE '567 remain silent about the walls of the washing container made of a flexible material comprising a metal film having an aluminum component.

Williamson teaches a condensing means, which is made of a sheet of aluminum (read as condensing surface made of a flexible material comprising a metal film having an aluminum component, since aluminum sheet is flexible), for dishwasher (col.2, L.56-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dishwasher of combined teaching of DE '882 and DE '567 by using a sheet of aluminum as the walls of the washing container as motivated

by Williamson so that the walls do not deteriorate when moisture condenses thereon (Williamson, col.2, L.58-59), thus enhance the lifetime of the dishwasher.

Response to Arguments

Applicant's arguments filed 03/31/2010 have been fully considered but they are not persuasive.

In response to applicant's argument that the modification proposed in the Office Action would not be readily determinable by those of ordinary skill in the art in view of the cited references, the Examiner's position is that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, DE '567 teaches an insulation panel with variable heat conductivity (DE '567, title), which is reasonably pertinent to the particular problem with which the applicant was concerned. In response to applicant's argument about In re Keller, the Examiner's position is that the combination of DE '882 and DE '567 would be incorporated since one of ordinary skill in the art at the time the invention was made would have found obvious to modify the dishwasher of DE'882 by utilizing a variable heat damping layer as mentioned in DE'567 instead of the variable heat damping layer as mentioned in DE'882 in order to provide a vacuum insulation, thus enhance insulation efficiency (General Knowledge). In response to applicant's argument that the combination of references cited in the Office Action is a product of improper hindsight, the Examiner's position is that it must be recognized that any judgment on

obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See In re McLaughlin, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, since DE '882 teaches a dishwasher comprising a heat damping layer and DE '567 teaches a heat damping layer, one of ordinary skill in the art at the time the invention was made would have found obvious to modify the dishwasher of DE'882 by utilizing a variable heat damping layer as mentioned in DE'567 instead of the variable heat damping layer as mentioned in DE'882 in order to provide a vacuum insulation, thus enhance insulation efficiency (General Knowledge) (i.e. knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure). In response to applicant's argument that the Examiner does not provide any evidence to support the contentention "an insulation efficiency of a vacuum insulation is higher than an insulation efficiency of a non-vacuum insulation", the Examiner's position is that according to Encyclopedia Britannica, there are three mechanisms for heat transfer (i.e. convection, thermal radiation, and conduction). Since convection and conduction are minimized in vacuum, the heat transfer in vacuum is lower than the heat transfer in non-vacuum (i.e. the efficiency of vacuum insulation is higher than the efficiency of non-vacuum insulation). Moreover, according to NanoPore Thermal Insulation (NPL), it shows that the R-value (i.e insulation efficiency) of vacuum is higher than the R-value (i.e insulation efficiency)

of ambient under the same insulation material (Nanopore HP) (Figure showing the R-valve, comparision between Nanopore HP-ambient and Nanopore HP-vacuum). This shows that the efficiency of vacuum insulation is higher than the efficiency of non-vacuum insulation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN KO whose telephone number is (571)270-3726. The examiner can normally be reached on Monday to Thursday, 7:30am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on 571-272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SK
/Michael Kornakov/
Supervisory Patent Examiner, Art Unit 1714